

BS99047

U.S. Application No. 09/417,051 Examiner BUI Art Unit 2611
Response to January 31, 2005 Office Action

AMENDMENT TO THE CLAIMS

1. (Cancel)
2. (Cancel)
3. (Cancel)
4. (Cancel)
5. (Cancel)
6. (Currently Amended) An data architecture for storing EIT data in a memory of a set-top box, comprising:

a single segment data structure per segment of the EIT data, each segment data structure comprising a start time for each segment, a number of events within each segment, and into which a segment of EIT data containing information related to one or more events and an event instance table pointer corresponding to the segment data structure are stored;

an event instance table pointed to by each said event instance table pointer corresponding to said segment data structure, the event instance table comprising:

an one or more event instance data structure for each event in a segment, the event instance data structure storing unique information for a particular instance of each event and each corresponding to one of said one or more events and each containing an event data structure pointer; and;

an event data structure pointed to by the event data structure pointer, the event data structure storing one or more event data structures containing common information for multiple instances of the same event events having same event-related information, wherein each particular event data structure is pointed to by said event data structure pointer stored in those of said one or more event instance data structures that correspond to said events having same event-related information.

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7. (Previously Presented) The data architecture recited in claim 6, further comprising an event-related data table, comprising:
- event-related data associated with said events having same event-related information; and
- a pointer to said event detailed structure associated with said events having same event-related information.
8. (Original) The data architecture recited in claim 6, wherein said segment data structure has a length of 10 bytes or less.
9. (Original) The data architecture recited in claim 6, wherein, said event instance data structure has a length of 12 bytes or less.
10. (Original) The data architecture recited in claim 6, wherein said event data structure has a fixed portion having a length of 12 bytes or less and a variable portion having an average length of approximately 70 bytes.
11. (Currently Amended) A method for storing EIT data ~~in a set-top box~~, comprising the steps of:
- (a) receiving a segment of EIT data;
- (b) storing said segment;
- (c) creating a single segment data structure per segment of the EIT data, each segment data structure comprising a start time for the segment, a number of events within the segment, and an event instance table pointer pointing to an event instance table, the event instance table comprising:
- an event instance data structure for each event in a segment, the event instance data structure storing detailed information for a particular instance of each event and an event data structure pointer; and

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an event data structure pointed to by the event data structure pointer, the event data structure storing common information for multiple instances of the same event ~~an event instance data structure associated with a particular event in said segment;~~

(d) extracting event-related data pertaining to a said particular event;

(e) comparing the extracted event-related data to event-related data previously stored in the event instance data structure ~~an event-related data table;~~

(f) only if a match occurs in step (e), then obtaining the ~~an~~ event data structure pointer to detailed data associated with the said particular event ~~from said event-related data table if a match occurs in step (e);~~

(g) storing the said event data structure pointer in the ~~said~~ event instance data structure; and

(h) storing the said event instance data structure in the ~~an~~ event instance table.

12. (Cancel)

13. (Currently Amended) The method of claim 11, further comprising the steps of:

(i) creating the ~~an~~ event data structure in which detailed data associated with said particular event is stored when there is no match in comparing step (e);

(j) creating the ~~an~~ event data structure pointer to said event data structure created in step (i); and

(k) storing said extracted event-related data and said event data structure pointer created in step (j) in an said event-related data table.

14. (Original) The method recited in claim 13, further comprising the step of hashing said event-related data prior to comparing step (e).

15. (Previously Presented) The method recited in claim 11, further comprising the steps of:

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(i) determining if said extracted event-related data corresponds ~~corresponding~~ to a the first event in the EIT data;

(j) creating the ~~an~~ event data structure in which detailed data associated with said particular event is stored if step (i) indicates the event-related data corresponds to the first event;

(k) creating the ~~an~~ event data structure pointer to said event data structure created in step (j); and

(l) storing said extracted event-related data and said event data structure pointer created in step (k) in an ~~said~~ event-related data table.

16. (Previously Presented) The method recited in claim 11, further comprising the steps of:

(i) determining if all events in said segment have been processed; and

(j) repeating steps (c)-(h) until all events in said segment have been processed.

17. (Previously Presented) The method recited in claim 11, further comprising the steps of:

(i) determining if all segments in said EIT data have been processed; and

(j) repeating steps (a)-(h) until all segments in said EIT data have been processed.

18. (Cancel)

19. (Cancel)

20. (Cancel)

21. (Cancel)

22. (Currently Amended) A set top box comprising:

a receiver to receiver EIT data and format said EIT data into formatted EIT data;

a processor to process said formatted EIT data; and

a memory having a data architecture in which the processed EIT data is stored so as to significantly reduce inherent redundancy of the EIT data, the data architecture

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comprising a single segment data structure per segment of the EIT data, each segment data structure comprising a start time for the segment, a number of events within the segment, and an event instance table pointer pointing to an event instance table, the event instance table comprising:

an event instance data structure for each event in a segment, the event instance data structure storing detailed information for a particular instance of each event and an event data structure pointer; and

an event data structure pointed to by the event data structure pointer, the event data structure storing common information for multiple instances of the same event.

23. (Cancel)
24. (Original) The set top box of claim 22, wherein said EIT data is reordered by time prior to being sent to the set top box.
25. (Original) The set top box of claim 22, wherein said processor reorders the formatted EIT data by time.